Demographic Currents:
Trends and Issues that Face the United States, the United Kingdom and Canada

by Richard S. Belous

With a Foreword by
Thomas H.B. Symons

Occasional Paper No. 7

BRITISH-NORTH AMERICAN COMMITTEE

Sponsored by
British-North American Research Association (U.K.)
National Planning Association (U.S.A.)
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The British-North American Committee

At the Committee's first meeting in New York City in December 1969, the following statement of its aims was authorized:

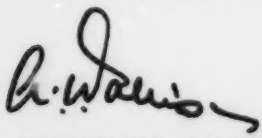
> *The British-North American Committee has been established to study and comment upon the developing relationships between Britain, the United States and Canada. It seeks to promote clearer understanding of the economic opportunities and problems facing the three countries, to explore areas of cooperation and possible friction, and to discover constructive responses. It believes that sound relations between these three countries in the context of an increasingly interrelated world are essential to future prosperity and seeks to promote better understanding through the collection of facts and their widespread dissemination.*

During the 22 years since then, the Committee has broadly maintained these aims and has sponsored a series of objective studies undertaken by qualified experts in the three countries and published with the Committee's approval. On the basis of these factual studies and of discussions at its meetings, the Committee has also issued policy statements signed by its members.

The diversity of issues that the BNAC has addressed is shown by the listing of 45 titles beginning on page 45.

The Committee's membership includes business, banking, labor, agricultural, and professional leaders from the United Kingdom, the United States and Canada. The Committee is sponsored by three nonprofit research organizations—the British-North American Research Association in London, the National Planning Association in Washington and the C.D. Howe Institute in Toronto.

The BNAC is a unique organization both in terms of its broadly diversified membership and in terms of the blending of factual studies and policy conclusions on issues important to the three countries. It meets twice a year, once in the United Kingdom and once in North America. Its work is jointly financed by funds contributed from private sources in the United Kingdom, the United States and Canada. Offices on behalf of the Committee are maintained at 1424 16th Street, N.W., Suite 700, Washington, D.C. 20036, and at Grosvenor Gardens House, 35–37 Grosvenor Gardens, London SW1W 0BS. Dr. Richard Belous in Washington is North American Director of the Committee, and Simon Webley in London is the British Director.



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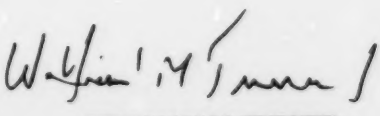

WILLIAM I.M. TURNER

Cochairmen of the Committee

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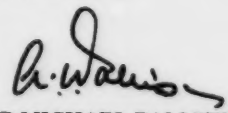
Preface by the Joint Chairmen

Demographic-related issues are high on the list of concerns in the United States, Canada and the United Kingdom. Birth rates, the possibility of mass migration and the age structure of populations in various countries are of vital interest to public and private sector leaders.

Demographic shifts will have a major impact on employers and the workforce and are also bound to have significant consequences for all sectors of society, especially for the social welfare systems in our three countries. Further, they will inevitably have implications for the types of products demanded by consumers.

The members of the British-North American Committee have been very interested in how demographic-related forces will influence our societies, governments, corporations, labor unions, and universities. The BNAC's Executive Committee therefore established a Working Group on Demographic Issues, chaired by Professor Thomas H.B. Symons. This study, written by the BNAC's North American Director Dr. Richard S. Belous, is based on the discussions of the Working Group and the conclusions reached by its members.

This report does not claim to represent the unanimous view of all BNAC members. But the Committee considers that the topic is of such major current importance as to justify publication of the study in an effort to help public and private decisionmakers deal with the many complex and difficult demographic-related issues that will confront them.



SIR MICHAEL PALLISER
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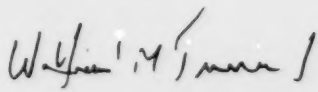

WILLIAM I.M. TURNER
Cochairman

JOHN HINDS
Chairman, Executive Committee

Demography, the Carapace of the Economy: A Foreword

by Thomas H.B. Symons

Chairman of the British-North American Committee
Working Group on Demographic Issues

I have two reasons for couching the title of my Foreword in these terms. One is, simply, that since I first heard this splendid word, carapace, I have been on the look-out for a situation in which I could use it! Second, I think the notion of demographics playing the role of a carapace in the economy is a genuinely useful one.

You will recall that the carapace is the body shell of turtles and crustaceans. It is a shield that covers much of the body of crabs, lobsters and members of the tortoise family. It protects them, but it also circumscribes them, confines them, and places some constraints on their growth and movement. The analogy is not exact with the role played by demography in the economy, but there are substantial and significant similarities.

Demography, the scientific study of human populations, is concerned with the size, structure, characteristics, and distribution of populations. Demographics are the data resulting from such studies.

The information that these studies can give to us about the nature, changing circumstances and possible future trends in population statistics is tremendously important. Such information is—or should be—a fundamental ingredient in the formulation of present and future government policies, in corporate, labour market and educational planning, and, indeed, in a good deal of individual decisionmaking.

To a large extent, the realities of population size and growth, and of population characteristics and distribution, govern, or at least set some broad outer limits upon, what is possible for the economy and for governments and the corporate world within the economy. It is in this sense that I would argue that demography functions in many

ways as a carapace to the economy. That being the case, one needs to know both present demographic realities and future demographic trends.

Demographics as a Basis for Policy

The significance of demographic information as a basic factor in public policy has received increasing recognition. Many countries, for example, have initiated various reviews to examine and report upon their demographic situation: the growth (or decline), the current mix and the likely future characteristics of their populations. Some countries have established special secretariats to monitor these key aspects of their national life and national prospects on an ongoing basis.

A growing number of corporations, too, are recognizing the importance, the sheer utility, of demographic data. Some leading firms in the investment community, for example, have retained demographers to advise them on population trends and to assist them in examining the economic implications of such trends. Although demographers are still a rarity on Wall Street or in the City, their numbers will increase as people perceive the common sense of longer-term investment based on demographics. Similarly, manufacturing and service corporations will be wise to pay increasing attention to demographic information and projections as they plan their product development and marketing programmes. Changing demographics can bring about sharp changes in corporate prospects in a host of industries, ranging from baby food and homebuilding to transportation and telecommunication.

The Working Group: Diverse Points of View

The British-North American Committee, with its membership drawn from three countries and from a diversity of backgrounds and interests, provides an unusual forum in which to examine demographic trends and their implications in the round and yet from several vantage points. The Working Group established for this purpose by the Committee was well attended, and it became clear that its members were very interested in exploring both the broader

implications for their countries of demographic shifts and what these changes might mean to their corporations, labour unions, political institutions, educational systems, cultures, social conditions, and daily life. What challenges and opportunities might be opened up? What actions by the private and public sectors might be appropriate in light of current and anticipated demographic changes?

Members were also greatly interested in the impact of demographic change on the growing and often difficult inter-relationships between Western industrialized countries and the nations of the economically less developed world. Recent and expected increases in the level of migration from developing to developed countries are only the most visible part of this complex inter-relationship.

The meetings of the Working Group were lively and protracted. Information assembled in background papers was thoroughly debated. Other documents in the field were circulated and discussed. Three Committee members—Ronald Hampel, Executive Director of ICI for the United Kingdom, Howard Samuel, President of the Industrial Union Department, AFL-CIO, from the United States, and Earl Orser, Chairman of the London Life Insurance from Canada—made presentations that took a thoughtful look at what the demographic changes might mean for their organizations, noting and commenting on, for example, pension-related issues, the scope for new financial products, employment and training needs, and culture, heritage, health, and gender-related questions. Other Committee members—Gerry Eastwood, David Morton, David Schramm, and Peter White—received drafts of this paper, which has benefitted from their knowledge and detailed comments.

The Working Group also consulted with various outside experts in the three countries and at the United Nations. The Chief Statistician of Canada, Dr. Ivan Fellegi, was kind enough to participate in one of its sessions. Discussions were also held with Dr. Janet Norwood, Commissioner of the Bureau of Labor Statistics in the United States, and with Sir Jack Hibbert, Director of the Central Statistical Office in the United Kingdom. Both Dr. Fellegi and Bruce Petrie, Assistant Chief Statistician and Secretary of the National Statistics Council of Canada, reviewed and commented upon draft texts.

The Committee is particularly indebted to the BNAC's North American Director Dr. Richard S. Belous, who served as its scribe, research arm and organizing guide throughout, and who then, drawing upon the discussions, papers and experience of the Working Group, wrote this admirably succinct and comprehensive Occasional Paper.

Profound Changes

As the information presented in the paper makes clear, the United States, the United Kingdom and Canada are already in the midst of profound demographic changes that are global in scope and ramifications and that promise to have an accelerating impact in the future. The implications of these changes are pervasive: for corporate policies and practices, for organized labour, for labour-management relations, for professional bodies, for educators, for individual and family planning, and for the whole gamut of governmental policy and planning.

Salient trends are clearly portrayed in the charts, tables and text that follow. The most striking of these is the dramatic reduction in the rate of population growth in our three countries and, in fact, in almost all the more industrially developed nations. This reduction will be most pronounced in the 'working age' population (18 to 65), which is expected to be in a state of negative growth by 2020-2030, just three decades away, in the United States, the United Kingdom, Canada, Germany, and Japan. In the case of Germany, a large drop in population is projected, from 60 million to 41 million, during the period from 1990 to 2050, unless there are marked changes in the birth rate or other variables.

As a result of this reduction in the rate of population growth, combined with changes in terms of life expectancy, the industrialized countries will experience considerable change in the age structure of their populations. In particular, a pronounced aging of the population is anticipated, with those over 65 years of age increasing from 10 to 21 percent of the Canadian population, from 11 to 19 percent in the United States, and from 15 to 20 percent in the United Kingdom between 1980 and 2040. The anticipated increases in the proportions

of the population over 65 are even greater for Japan, from 9 to 23 percent, and for Germany, from 16 to 28 percent.

This greying of the population may have further dimensions. Within the over 65 years of age population, there will also be a change in the age structure, with a significant increase in the proportion of those over 65 who are over 75. The percentage of the over 65 population over 75 years of age in Canada, for example, is expected to increase from about 39 to 46 percent between 1986 and 2001.[1] The gender distribution is also expected to change, with the male proportion of the over 65 population projected to drop from 42 to 37 percent over the next several decades.

The other side of the coin of this large increase in the older, over 65, population is a drop in the percentage of the population in the traditional 'working age' bracket between 18 and 65. While individual capacities and circumstances will vary, and these conventional age brackets are arbitrary and for some purposes unsuitable, it appears, none the less, that there will be a significant increase in dependency ratios; that is, there will be many more senior citizens to be supported by societies at a time when the active workforce, as traditionally defined, will have shrunk appreciably. This raises the question: can we afford an aging society? The question has been thoughtfully explored by the Chief Statistician of Canada who concluded that, should economic growth continue at the rate experienced over the past 30 years, "we should be able to afford the public cost of an aging society."[2] Others, however, including the Organization for Economic Cooperation and Development, offer a different viewpoint. Making use of different projections and different assumptions than those employed by Dr. Fellegi, they reach some different conclusions about the probable impact of changing demography on public expenditure for social programmes.[3]

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[1] Neena L. Chappell, *The Aging of the Canadian Population* (Ottawa: Canadian Studies Directorate, 1990), Table 2, p. 12.

[2] Ivan P. Fellegi, "Can We Afford an Aging Society?" *Canadian Economic Observer* (Ottawa: Statistics Canada, 1988).

[3] Raj Chawla, "Dependency Ratios," and Mary Anne Burke, "Implications of an Aging Society," *Canadian Social Trends* (Ottawa: Statistics Canada, Spring 1990).

Regardless of this larger question of the overall capacity of our countries to afford an aging society, it is clear that the greying of the populace will necessitate a significant reallocation of public expenditures. A very large increase is likely, for example, in the percentage of social expenditure allocated to pensions and health, with perhaps a concomitant drop in the percentage directed to education. Such a prospect will raise social and public policy issues of high order.

Demographic trends point to the need for attention to the implications of change in many other facets of society, in addition to the phenomenon of aging. These include significant shifts in the gender, religious and ethnic makeup of society, and apparent changes in the structure and role of the family. Is the family losing its economic relevance and disappearing as the basic social institution? To what extent is the family continuing to meet its members' needs and how many of these needs are now being met indirectly? Demography is concerned with relationships as well as with data, for example with the complex relationships of the modern family with other individuals, with other households and families, with other social institutions, with government, with business firms, with labour unions and markets, and with all the structures and organizations of contemporary society.

The Workforce

An examination of demographic trends points also to large and accelerating changes in the composition of the workforce. In the United States, for example, projections indicate that for the 15-year period from 1985 to 2000, American-born white males will constitute only 15 percent of the net new workers joining the labour force, whereas they comprised nearly 50 percent of that labour force in 1985. The change in the ethnic and cultural mix of the labour force is raising many human rights-related questions. Similarly, the gender shift, with a strong and continuing trend to greater female participation, raises numerous issues in areas such as equal pay for equal work, maternity leave and maternity pay policies, child care arrangements, flexible work schedules, and hiring, seniority and promotion policies. Increasing sensitivity to human rights should also

lead to enhanced employment opportunities for the handicapped and for the elderly.

All these developments, and many others, underscore the need for more attention and support to be given to on-the-job education, training, re-training, and up-grading programmes as part of employment practice, and, more broadly, for a general strengthening of education, remedial education and adult education programmes. For much of this work, it would be useful to have a greater input from the private sector, both management and labour, in order to achieve a balanced and successful long-term labour force development strategy. To this end, it may also be useful to establish appropriate national organizations or boards, representative of the major labour market partners, to advise upon and to direct these strategies. Composed of business and labour representatives with additional members drawn from the field of education and other interested sectors of the community, such organizations would have to make consultation and cooperation the hallmark of their approach.

Migration Issues

In this situation of markedly declining rates of population growth and shifts in the composition of the workforce, the demographics of immigration and immigration policies become increasingly important.[4] This is already the case and will become steadily more so in Canada, the United States and the United Kingdom, as well as in many other countries. In the five-year period from 1981 to 1986, for example, immigration (net migration, 264,000) represented 21 percent of Canadian population growth. In the next five-year period, 1986-91, this figure is estimated to have nearly doubled with a net migration totaling 580,000, representing 38 percent of the country's population growth.

Mass migration flows may well provide the greatest challenge of the coming century. It is a theme that brings together in one arena the concerns of the industrialized countries arising from their declining rates of population growth and their labor shortages in certain

[4] Economic Council of Canada, *Economic and Social Impacts of Immigration* (Ottawa, 1991).

areas and the concerns of the less developed countries arising from their population pressures and limited economies. It is an area, for all concerned, both of great potential opportunity and of great potential conflict.

The mention of immigration should remind us that in any consideration of the demographics of one country, or of three countries, one must consider as well the demographics of the surrounding world. The world surrounding the United States, the United Kingdom and Canada is undergoing vast and pervasive demographic change. At a time when the industrialized countries are experiencing notable reductions in the rate of population growth, the rest of the world is continuing to multiply at a great rate. The recent report of the United Nations Population Fund anticipates that the globe's current population of 5.4 billion will rise to 6.4 billion by 2001 and to 8.5 billion by 2025, possibly reaching 10 billion by 2050. It notes that nearly all, 95 percent, of this population growth will be in the developing countries.[5]

There is, thus, a huge and growing population imbalance developing between the more and the less developed parts of the world that will generate immense tensions. These tensions will be exacerbated by the lack of funding for health and education, explosive urban growth, increasing food shortages, and destructive changes in the ecosystems of the less developed countries. The needs of these countries will place extraordinary and mounting pressures on the industrialized countries that may go well beyond the anticipated issues in the field of aid and immigration and impinge upon their own economic and political survival.

Research Needs

Clearly, demographics pose a great challenge to our three countries. This challenge comes both from their internal demography and from the demographic change in the world around them. The situation calls for major and sustained research efforts. The fact is that there has been comparatively little research on most demographic

[5] Nafis Sadik, *The State of World Population 1991* (New York: United Nations Population Fund, 1991).

questions. Yet without such research there is a lack of knowledge about the facts and potential of demographic change. Until the facts are fully available, the processes of understanding their implications and of preparing for their impacts cannot usefully proceed. All writers on the subject, despite the contributions to knowledge that they bring, point to the need for more knowledge and research. More knowledge, more widely shared, will make possible better long-term planning at community and national levels in the private sector and at the international level. It will make possible a more comprehensive and proactive thinking about demographic issues and a move away from the present almost entirely reactive response to the events of demographic change.

In the field of aging, for example, the industrialized countries are still coming to terms with questions basic to increased life expectancy.[6] Not much is known about the interplay of ethnicity and aging nor, even, about the patterns and trends in the health of seniors. Happily, research is suggesting that declining health as a result of age is not as serious as many people believe. Research on retirement focuses primarily on men; relatively little is known about the retirement of women. On the other hand, most widowhood studies are conducted on women; men who become widowed are seldom studied.

Nor is much known about the information needs of seniors or about their role involvements as opposed to their role exits. The significance of extended family kin has not been well researched, and little research has been conducted on the role of friendship in the lives of the elderly, although current studies suggest that it is much more important than previously thought. These and countless other questions about the impacts of aging await research in countries that are already well into the greying process. At the other end of the scale, there is much that we do not know about fertility and the demographics of childhood.

Conversely, in these greying societies, with their shrinking 'working age' populations, much more attention must be paid to ergonomics: the study of the efficiency of people in their working environment.

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[6] Chappell, *The Aging of the Canadian Population*, p. 17.

At the international level, it is astounding how little attention has been given to current demographics of populations on the move or to the potential for and implications of much larger population shifts in the future.

Faced with this lack of information about the facts and implications of demographic trends and issues, the British-North American Committee has, I believe, rendered a service by providing, in its Working Group and plenary sessions, a forum for their discussion. The BNAC has rendered a further service by its publication of the resulting Occasional Paper prepared by Dr. Belous.

Conclusion

Some of the data set out in the paper can be alarming—but it is neither necessary nor desirable to be alarmist or sensational about the subjects under consideration. The world has no need for demographic catastrophists! However, we do need to know and to be aware in order to be prepared and to be helpful. With knowledge and understanding, our countries can cope well with the demographic challenges that lie ahead. As a distinguished scholar has noted, "Much depends on the societal will."[7]

The impending demographic changes have, of course, tremendous implications for the social welfare and support programmes in all our countries. Most of our social programmes were planned and brought into operation during times when the population of senior citizens was quite small, and when the youth and working force components of society were expanding. There was an assumption of population growth and of an age pyramid that is no longer true. Demographic changes are playing havoc with these and many other assumptions.

Similarly, the tax base in all our countries will be profoundly affected by these demographic changes, as will the needs, structures and costs of our entire educational system and the whole range of public and corporate policy in employment, manufacturing and trade.

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[7] Karol Krotki, "Why Are Canadians Dying Out?" *Transactions of the Royal Society of Canada*, Series V, Volume IV (Ottawa, 1989), p. 137.

In this situation, the importance of adequate and reliable statistical information should be clear. Unfortunately, there are serious problems in a number of the major trading countries about the reliability, timeliness and adequacy of the official statistics.[8] There are growing suspicions that data are not complete, not adequate and not properly balanced, and that, in some instances, possibly they are being too long withheld or too much massaged by government.

In closing, I would like to suggest that business, labour, government, and the professions all need to keep a sharp eye on these demographic trends. Such trends are not immutable; but we need to know about them in order to change them or to work well with them. To a large extent, they will set the framework, and perhaps the parameters, for the economy and for both government and corporate policy. To a degree, they will constitute a carapace for the economy.

Having ventured all this, I should also perhaps remind you that with demographics, as with other statistics, one can prove or predict almost anything. One recent study in my country, for example, concludes that without any immigration and assuming the current fertility rate, the last Canadian will disappear from the face of the earth in the year 2786, which suggests at least one avenue of possible solution for all our worldly problems.

[8] P.G. Moore et al., *Official Statistics: Counting with Confidence*, The Report of a Working Party on Official Statistics in the UK (London: The Royal Statistical Society, July 1990).

About the Authors

Richard S. Belous is the North American Director of the British-North American Committee. He is also Vice President, International Affairs, and a Senior Economist at the National Planning Association, the American sponsor of the BNAC. He was an undergraduate at Columbia College and holds M.A. and Ph.D. degrees in economics from George Washington University. Dr. Belous is an adjunct lecturer at GWU. Before coming to the BNAC and NPA, he was an economist with the Conference Board and the Congressional Research Service. He was also Executive Director of the National Council on Employment Policy. His primary areas of research include international economics and human resources. Dr. Belous has been an advisor to two U.S. presidential commissions.

Thomas H.B. Symons, Vanier Professor at Trent University, is a Director of Celanese Canada, Inc., and Chairman of the National Statistics Council of Canada.

I. Common Concerns

Demographic projections from the time of the Reverend Thomas Malthus onward have often been quite wide of the mark. Recently, several analysts have painted a very grim picture of the Western world in a future era of "birth dearth."[1] Others have raised questions such as whether we can afford our aging societies and whether corporations will be able to meet their human resource needs.

Demographic issues are the source of many common concerns for public and private sector leaders in the United States, the United Kingdom and Canada. This study draws on data and evidence from many different sources in an effort to get to the heart of these issues. Public sector estimates from national governments and international agencies have been used. Interviews with leading experts in the United States, the United Kingdom and Canada have been conducted. Also, the observations and experiences of British-North American Committee members have been utilized in this study. BNAC members include business, labor, academic, and professional leaders from the three countries, and they have provided keen insight as to how demographic trends can affect various parts of our societies and firms and organizations in particular.

[1] Ben J. Wattenberg, *The Birth Dearth* (New York: Pharos Books, 1987).

II. Basic Conclusions

Based on the extensive information drawn from the diverse sources noted in Section I, the following conclusions can be drawn.

(1) The United States, the United Kingdom and Canada—despite some short-term fluctuations in birth rates—are in for a period of very low population growth for the rest of this decade and in the early part of the 21st century.

(2) In the United States and Canada, immigration will represent a larger portion of population increases than in the recent past. For example, immigration could represent almost 50 percent of the U.S. net population growth by the year 2010. Given the United Kingdom's European Community (EC) membership, immigration should be of considerable and growing importance there as well.

(3) The three countries will experience dramatic increases in the number of older people in their populations.

(4) Although the relative size of the demographic changes should be quite large in the 1990s and early 2000s, with sensible planning and timely action the social and economic changes should be manageable.

(5) Standard "gloom and doom" predictions in this area fail to recognize how societies and economies respond to demographic pressures and changing signals from the market place that will make the necessary changes more acceptable.

(6) In terms of labor markets, these demographic trends point more to occupational and regional "mismatches" than to general shortages of labor.

(7) The cost of our aging populations will be quite expensive. Changes will be necessary in public and private sector pension and benefits systems if our societies are to keep these systems affordable and sound.

(8) While the demographic changes in many Western nations should be manageable, demographic shifts in Third World nations could have serious consequences for both the less developed and the Western countries. There could be very serious tensions between these two groups arising from their different demographic circumstances.

(9) Recent changes in the Soviet Union and Eastern Europe could result in major increases in westward migration.

III. Population Trends

What is the general population landscape of the three BNAC member countries? Table 1 presents average annual population growth rates for the United States, the United Kingdom and Canada as well as Germany and Japan in the period 1950 to 2050. The common thread is the dramatic reduction in the rate of population growth in these nations.

In fact, Germany experienced population declines in the 1980-90 period. While former East Germany has a higher total fertility rate than former West Germany, the new united Germany's fertility rate is still considerably below the rate required to stop declines in the growth of its population. Barring significant changes in fertility, migration or mortality by 2010-20, Japan will join Germany in this trend, and by 2030-40 the United Kingdom will start to experience population declines.

In 1989 and 1990, the U.S. birth rate was roughly 10 percent higher than most leading demographers had predicted. Thus, the United States has experienced some increases from very low birth rates. It remains to be seen if these recent growth levels will be sustained throughout the 1990s. Even if they are, the U.S. birth rate will remain well below the levels of the 1950s and 1960s.

Immigration and the Third World

Even in nations in which there will be continued (but modest) population increases, there will be basic differences in the sources of their population growth. For example, as Table 2 (p. 6) shows, net migration in Canada represented 20 percent of population growth in the 1981-86 period; however, in the 1986-91 period, net migration is expected to increase to 38 percent of population growth. Net immigration will also represent a larger source of population growth in the United States in the near future (see Chart 1, p. 7). In the United Kingdom, government and private sector leaders will have to take

TABLE 1. AVERAGE ANNUAL POPULATION GROWTH RATES, 1950-2050*
(Percent)

	1950-60	1960-70	1970-80	1980-90	1990-2000	2000-10	2010-20	2020-30	2030-40	2040-50
United States	1.7	1.3	1.1	0.9	0.7	0.5	0.5	0.3	0.2	0.4
United Kingdom	0.4	0.6	0.1	0.1	0.1	0.1	0.1	0.0	–0.2	–0.2
Canada	2.7	1.8	1.2	1.0	0.9	0.7	0.6	0.4	0.3	0.3
Germany	0.7	1.3	0.2	–0.1	–0.2	–0.6	–0.7	–0.8	–0.7	–0.8
Japan	1.1	1.1	1.1	0.5	0.4	0.1	–0.2	–0.3	–0.2	–0.2

*1950-80 actual rates based on OECD data; 1980-90 to 2040-50 projected rates based on OECD demographic model (median fertility variant projections).

Source: OECD demographic data file, 1990. The adopted scenario is basically a long-term simulation for illustrative purposes. As such, the median fertility variant does not reflect the fairly wide range of plausible future scenarios.

TABLE 2. COMPONENTS OF POPULATION GROWTH IN CANADA
(Thousands of People or Percent)

	1981 to 1986		1986 to 1991	
Total growth	1,251	100%	1,520	100%
Natural increase	987	79	940	62
Net migration*	264	21	580	38

*Net migration equals inflow minus outflow of population.

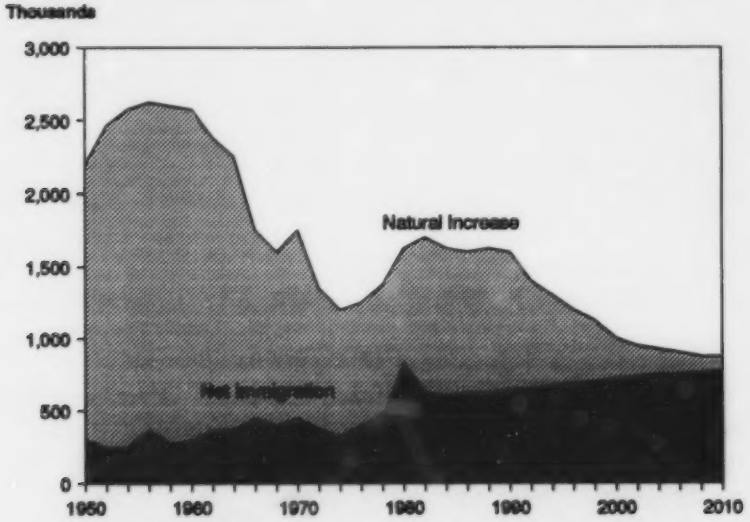
Sources: Statistics Canada and forecasts by the Coopers & Lybrand Consulting Group.

into account the implications of the free flow of people in a post-1992 European Community. Although a free flow exists at present under the Treaty of Rome, the single market program could increase migration due to growing economic and political linkages. Currently, the British Office of Population, Censuses and Surveys assumes zero net migration for the United Kingdom as a whole because of EC 1992.

A major portion of the immigration flows into the United States and Canada appears to be represented by the higher and lower ends of the occupational spectrum. For example, there is an increase in the number of foreign-born teachers and students in many American and Canadian engineering and graduate schools. At the same time, many recent immigrant workers in the U.S. and Canadian labor markets are unskilled workers. The needs of immigrants from each end of the occupational spectrum are often quite different.

Key factors behind these major immigration flows are the significant demographic, economic and political differences between Western industrialized nations and the less developed countries. For example, while population growth will be very low in Western nations, it will continue to be very high in Third World countries. This high growth rate will create major economic strains in many LDCs. Faced with rapid growth in labor supplies, it will be hard for most of the LDCs to hold down unemployment. In many cases, LDC populations could grow at a faster rate than LDC gross domestic products,

CHART 1. SOURCES OF U.S. POPULATION GROWTH, 1950-2010



Source: NPA Data Services, Inc.

resulting in falling real standards of living. Even the highly educated in many LDCs may be unable to find employment.

In this situation, migration to prosperous Western industrialized nations will be a safety valve for many workers in LDCs. However, this migration will create numerous absorption problems for the Western industrial countries.

Based on World Bank projections, the rate of population growth in the less developed world will be much faster than in the more developed world (i.e., Europe, the U.S.S.R., the United States, Canada, Australia, New Zealand, and Japan). As indicated in Table 3 (p. 8), between 1990 and 2025, world population should increase by 59 percent. The rate of population growth in the less developed world should be 73 percent in this period, while population growth in the

TABLE 3. TOTAL POPULATION AND GROWTH RATES

	(A) Population (Millions)		
	World	**Less Developed**	**More Developed**
1990	5,285	4,074	1,211
1995	5,744	4,504	1,240
2000	6,204	4,934	1,265
2010	7,112	5,808	1,304
2020	7,993	6,663	1,330
2025	8,415	7,078	1,336
Percent increase Between 1990 and 2025	59%	73%	10%

	(B) Growth Rate (Percent)		
	World	**Less Developed**	**More Developed**
1985-90	1.74	2.11	0.54
1990-95	1.66	2.00	0.47
1995-2000	1.54	1.84	0.41
2000-05	1.43	1.70	0.34
2005-10	1.31	1.55	0.27
2010-15	1.21	1.42	0.22
2015-20	1.13	1.32	0.16
2020-25	1.03	1.21	0.10

Note: "More developed" countries comprise Europe, the U.S.S.R., the United States, Canada, Australia, New Zealand, and Japan. "Less developed" countries comprise the rest of the world.

Source: The World Bank.

more developed world will be only 10 percent. The rapid population growth in the LDCs will change the relative distribution of world population. As seen in Table 4, Africa represented 11.5 percent of world population in 1985. However, by 2025, Africa should hold 18.9 percent of world population. At the same time, Europe and the U.S.S.R., which had 15.9 percent of world population in 1985, will represent only 10.1 percent in 2025. Further, the proportion of world

TABLE 4. PERCENT DISTRIBUTION OF WORLD POPULATION, 1985-2025

	Europe and U.S.S.R.	Asia	Oceania	North America	South America	Africa
1985	15.9	58.3	0.5	5.5	8.3	11.5
2000	13.1	59.1	0.5	4.9	8.4	14.0
2025	10.1	58.2	0.5	4.0	8.4	18.9

Source: The World Bank.

population living in North America will decline from 5.5 percent to 4 percent in the same period.

Given the recent changes in the Soviet Union and Eastern Europe, some observers have predicted a mass migration westward in Europe as unemployed workers in former communist nations seek jobs in the West. As *The Economist* has put it:

> So challenge number one for the world is how to respond to potential mass migration. Poland, a haven of plenty compared with the Soviet Union, is where Soviet migrants are liable to arrive first, but the Poles are struggling to cope with their own transition to capitalism, and will have to shovel most migrants back to the Soviet Union or across to Germany. Western governments . . . . should welcome as many of the most deserving as possible. That calls for burden-sharing within the European Community.[1]

It is reasonable to assume that not all members of society would agree on who "the most deserving" would be. This group could be defined on equity grounds, but some countries might wish to define "deserving" in terms of an individual citizen's potential economic contribution. Establishing regulations that define a "deserving" group and obtaining agreement on the regulations and the definitions on which they are based would be a difficult exercise.

[1] "The Russians are Coming," *The Economist*, October 20-26, 1990, p. 11.

Potential labor shortages in Western Europe could be made up for, in part, by migration from Eastern Europe and the Third World just as migration from Mexico and Central America has added to the U.S. labor supply. Canada has also increased its labor supply through immigration. However, this type of solution raises several issues. In many cases, the migrant workers may lack the skills required to fill specific jobs in Western Europe, the United States and Canada. Also, these nations may wish to continue restrictions on the flow of migrants for numerous social, political and economic reasons. Nevertheless, as the Canadian experience shows, once migration flows start, kinship ties cause natural pressures for an increase in the number of people who migrate to be with family members who have already immigrated.

In the longer run, major migration pressures should come more from the Third World than from Eastern Europe. Table 5 shows total fertility rates in various countries. While the total U.S. fertility rate is 1.88—lower than the 2.1 level required to hold a population stable without migration—Mexico's fertility rate is 3.58, and Algeria's rate is 5.92, well above the stable population level.

Table 6 (p. 12) shows that net migration has been a large factor in population increases in many countries, and the World Bank estimates that net migration will remain a major demographic force in many nations.[2] Predicting actual net migration patterns is as much an art as it is a hard science. For example, the World Bank projections were made prior to the war in the Persian Gulf and the recent events in the Soviet Union. These developments could have a significant impact on migration levels. However, taking into account that any estimate contains a good deal of guessing, it seems reasonable to conclude that:

- immigration to Western industrialized nations will increase in the near future; and
- Western public and private sector leaders will have to put greater emphasis on immigration-related problems *and* opportunities.

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[2] Rodolfo A. Bulatao et al., *World Population Projections: Short- and Long-Term Estimates* (Washington: The World Bank, 1990).

TABLE 5. TOTAL FERTILITY RATES, 1990

	Total Fertility Rate*
United States	1.88
United Kingdom	1.80
Canada	1.69
Japan	1.70
Germany (West)	1.38
Germany (East)	1.80
Czechoslovakia	2.00
Poland	2.20
Hungary	1.75
Bulgaria	1.90
Romania	2.14
U.S.S.R.	2.40
Senegal	6.50
Rwanda	8.00
Sri Lanka	2.67
Libya	6.87
Kenya	7.68
Algeria	5.92
India	4.26
Mexico	3.58
China	2.40

*"Total fertility rate" measures the average fertility of women over the course of their reproductive lives. A total fertility rate of roughly 2.1 is required to hold a population stable. Thus, the total fertility rate is the average number of children that would be born to a woman if women in a nation were to experience the current set of age-specific birth rates throughout their childbearing lifespan.

Source: The World Bank.

TABLE 6. ESTIMATED NET MIGRATION, 1985-90[a]
(Thousands)

United States	+ 2,900
United Kingdom	+ 121[b]
Canada	+ 370
Germany	+ 50
France	+ 105
Japan	– 15
U.S.S.R.	– 210
Bangladesh	– 35
Bolivia	– 40
El Salvador	– 212
Ethiopia	– 181
India	– 250
Mexico	– 750
Pakistan	– 256
Taiwan	– 100

[a] Estimated migration from all sources.

[b] Based on an estimate from the British Office of Population Censuses and Surveys for 1985-89.

Source: The World Bank.

IV. Demographics and Social Welfare

The anticipated declines in natural-born population growth rates can be expected to have a major impact on the age structures within the various industrialized countries. Table 7 (p. 14) sets out total population levels and levels by various age groups. Table 8 (p. 15) converts these estimates into percentage figures.

In general, a common pattern could emerge in all the countries presented in Tables 7 and 8. The relative size of their younger and working age populations could dramatically decrease. Consider the case of Canada. In 1980, Canada's 65+ population represented 10 percent of the total Canadian population; by 2040, the 65+ population could be 22 percent of the total.

As Table 3 demonstrated, the United States, the United Kingdom and Canada will be facing appreciably slower growth (or even absolute declines) in population. This will lead to an increase in the older populations within the countries. It will also result in net immigration representing a larger share of population growth in the United States and Canada, and possibly in the United Kingdom. Although there has been a recent small upturn in the U.S. birth rate, it does not appear that this shift will be long term or large enough to reverse the trends noted above.

These demographic trends raise numerous questions for social policies. The social welfare systems in Canada, the United States and the United Kingdom were built in an era when the population of senior citizens was relatively small. These systems were also built when population growth was quite strong. Thus, an older person approaching retirement could expect support from the growing number of younger workers in the labor force. This helps to explain why our nations felt that they were able to finance rapid growth in our public and private sector social welfare systems in the postwar era.

However, the demographic trends noted will play havoc with this basic assumption. Table 9 (p. 16) shows that the dependency

TABLE 7. AGE STRUCTURES OF POPULATIONS, 1980-2050
(Millions)

	1980	2000	2020	2040	2050
United States					
Age					
0 - 14	51.29	55.96	56.25	58.38	60.27
15 - 64	150.74	177.21	189.84	189.76	193.47
65+	25.71	32.23	47.42	61.27	60.73
TOTAL	227.74	265.40	293.51	309.41	314.47
United Kingdom					
Age					
0 - 14	11.83	11.73	11.62	10.30	10.69
15 - 64	35.85	37.15	37.22	35.58	35.40
65+	8.33	8.28	9.49	11.78	10.63
TOTAL	56.01	57.16	58.33	57.66	56.72
Canada					
Age					
0 - 14	5.53	5.65	5.58	6.38	6.88
15 - 64	16.23	19.57	21.11	20.90	21.58
65+	2.29	3.72	6.10	7.91	7.72
TOTAL	24.05	28.94	32.79	35.19	36.18
Japan					
Age					
0 - 14	27.53	22.31	21.19	20.83	20.28
15 - 64	78.88	85.68	78.40	71.86	70.59
65+	10.65	19.36	26.35	27.16	26.09
TOTAL	117.06	127.35	125.94	119.85	116.96
Germany					
Age					
0 - 14	11.19	9.22	7.08	6.88	6.97
15 - 64	40.83	40.19	34.14	25.92	24.62
65+	9.55	10.21	11.45	12.50	10.24
TOTAL	61.57	59.62	52.67	45.30	41.83

Sources: OECD demographic data file; 1980 actual numbers; all other years based on OECD demographic model (medium fertility variant projections).

TABLE 8. AGE STRUCTURES OF POPULATIONS, 1980-2050
(Percent)

	1980	2000	2020	2040	2050
United States					
Age					
0 - 14	23	21	19	19	19
15 - 64	66	67	65	61	62
65+	11	12	16	19	19
United Kingdom					
Age					
0 - 14	21	21	20	18	19
15 - 64	64	65	64	62	62
65+	15	14	16	20	19
Canada					
Age					
0 - 14	23	20	17	18	19
15 - 64	68	68	64	59	60
65+	10	13	16	22	21
Japan					
Age					
0 - 14	24	18	17	17	17
15 - 64	67	67	62	60	60
65+	9	15	21	23	23
Germany					
Age					
0 - 14	18	15	13	15	17
15 - 64	66	67	65	57	59
65+	16	18	22	28	24

Sources: OECD demographic data file; 1980 actual numbers; all other years based on OECD demographic model (medium fertility variant projections).

ratio—the ratio of so-called dependent populations (ages 0 to 14 or over 65) to nondependent populations (ages 15 to 64) multiplied by 100—will rise in the 1980 to 2050 period. For example, Canada's dependency ratio could climb from 48.1 in 1980 to 67.7 by 2050. The

TABLE 9. DEPENDENCY RATIOS, 1980-2050*

	1980	2000	2020	2040	2050
United States	51.1	51.6	49.8	62.4	62.5
United Kingdom	56.2	51.9	53.8	61.9	60.2
Canada	48.1	47.4	47.9	66.5	67.7
Japan	48.4	42.2	48.6	59.5	65.7
Germany	50.8	44.0	48.3	68.7	69.9

*The dependency ratio is calculated as follows:
[Population (0 - 14) + Population (65+)/Population (15 - 64)] x 100.

Sources: OECD demographic data file; 1980 actual numbers; all other years based on OECD demographic model (medium fertility variant projections).

U.K. dependency ratio could rise from 56.2 in 1980 to 60.2 in 2050. Germany's dependency ratio could be roughly 70 by 2050.

These trends will have a dramatic redistribution effect on the allocation of social expenditures. Table 10 presents some "base-line" estimates. Based on OECD demographic estimates, it is assumed that there will be constant real per capita expenditures by (and for) each age group within each type of social program. Given these

TABLE 10. SHIFTS IN THE DISTRIBUTION OF SOCIAL EXPENDITURE BY MAJOR PROGRAMS IMPLIED BY PROJECTED DEMOGRAPHIC CHANGE*
(Percent)

	Education		Health		Pensions	
	1980	2040	1980	2040	1980	2040
United States	32	20	22	24	40	52
United Kingdom	28	22	26	29	34	40
Canada	32	18	29	33	24	38
Japan	31	17	29	30	28	46
Germany	20	11	25	23	47	61

*Assuming constant real per capita expenditure by age within each program.

Sources: OECD demographic data file and OECD data file on social expenditures. Numbers for 1980 are real, while estimates for 2040 are based on OECD demographic model (medium fertility variant projections).

assumptions, the relative share of education expenditures (i.e., the ratio of education expenditures to total social expenditures in the three nations) could fall in the 1980 to 2040 period. Meanwhile, the relative share for health and health pensions could rise.

In terms of per capita health expenditures, the ratio of elderly (65+) to nonelderly (0-64) spending is large. For example, this ratio is 7.4 in the United States, 4.5 in Canada and 4.3 in the United Kingdom.

The Ability to Change

These shifts raise important questions about who is going to pay for the future social welfare systems in the three countries. Despite the dramatic demographic changes and the rise in the cost of welfare provisions, there are reasons to believe that the United States, the United Kingdom and Canada will be able to afford their aging populations at a standard at least as good as that in 1990. One of the best defenses of this position has been made by Dr. Ivan Fellegi, Chief Statistician of Canada.

Canada is expected to experience even greater relative demographic changes than the United States or the United Kingdom. As noted above, in 1980 only 10 percent of Canada's population was 65 years or older, compared to 11 percent in the United Kingdom. However, by 2020, 19 percent of Canada's population will be 65+, compared to 16 percent for both the United States and the United Kingdom. Canada is also expected to have a major slowdown in the growth of its workforce. Thus, a key policy question is: can Canada afford its aging society? Given increased rates of health care use by the elderly and higher health care and pension expenditures, will Canada have the resources to meet its demographic needs?

Dr. Fellegi believes that Canada will have the necessary resources to care for its "graying" population.[1] Based on his statistical

[1] Based on an interview with Dr. Ivan Fellegi in Ottawa on February 23, 1990. See also Ivan P. Fellegi, "Can We Afford an Aging Society?" *Canadian Economic Observer* (Ottawa: Statistics Canada, 1988); and OECD, *Aging Populations: The Social Policy Implications* (Paris: OECD, 1988).

analysis, Dr. Fellegi has concluded that the growth rate of government expenditures due to an aging society should be in line with Canadian economic growth rates of the past three decades. He estimates that if long-term growth rates do not decline, public expenditures for health, education and pensions should represent roughly the same percentage of Canadian economic output 50 years from now as they do today.

Some areas of social welfare spending (e.g., health) should experience relative increases because of anticipated demographic changes, while others (e.g., education) should experience relative declines. The net impact of these changes should be a relative balance.

Dr. Fellegi based his conclusion on the following projections.

- Maintaining a 1 percent annual growth in Canadian population under moderate fertility assumptions would require annual immigration of over 500,000 people by the 2030s. Currently, annual immigration is about 140,000 people. Thus, it is realistic to expect declines in Canada's total population in the next century. The portion of Canada's 65 and over population could more than double in the next half century.

- Despite these changes, the Canadian dependency ratio (as defined above, the number of dependent people per working person) is not expected to become as high as it was during the 1960s. Although there will be more older people in Canada, more women, students and older workers should be entering the labor force in the future. Also, there should be a smaller relative number of dependent children. It is sensible, therefore, to consider a smaller labor force-based dependency ratio.

- Thus, there will be a switch in the size of the brackets of dependents in Canada. In the future, the larger bracket will be composed of older dependents, while relatively fewer dependents will be young. More money will have to be allocated to fund programs for the elderly, but there should be relative savings in programs that support the younger dependent population.

Dr. Fellegi has calculated both "lower cost" and "higher cost" projections for health, education and pension expenditures. As he explains, "According to these calculations, the total public cost for the three major related programs would increase over 50 years at an average annual rate of 1.0 to 2.3 percent. One should compare this to the 2.1 percent average annual rate of real growth of the Canadian gross domestic product per working age person during the past 30 years, or to the 2.7 percent average annual rate of real growth of labor income per working age person." He predicts, "Should such average economic growth continue into the future, we should be able to afford the public cost of an aging society."

According to Dr. Fellegi, "It is worth keeping in mind that as important as basic demographic forces are, in the longer run their impact is likely to be overwhelmed by social, economic and policy developments." He points to the recent evolution in health, education and pension provisions in Canada: the movement of the provisions of all three systems during the past few decades has been demonstrably affected more by specific and identifiable policy changes then by demographic evolution.

Other leading demographic thinkers from the United States, Canada and the United Kingdom support the analysis of Dr. Fellegi. For example, Dr. Bernard Casey, a senior labor economist with the Policy Studies Institute in London, has cautioned against using simple dependency ratios as a basis for welfare expenditure predictions.[2] While computer models indicate that the British dependency ratio will increase by 2010, Dr. Casey does not believe that this is a good way of looking at the problem. "We will see shifts in early retirement and changing patterns of female labor force participation rates. Our notion of who is dependent will change," notes Dr. Casey, who is an advisor on the "Britain 2010 Project." He expects that all of the above changes will moderate the ratio of people who are really dependent on the working portion of the population. Thus, despite the shifts in demographic factors, real dependency in British society will not increase as fast as might be expected by looking at simple

[2] Based on an interview with Dr. Bernard Casey in London on March 26, 1990.

dependency ratio calculations. "Simple age-based dependency ratios are more pessimistic than employment-based dependency ratios," he explains.

Employment-based dependency ratios do not make simple assumptions of who is dependent by looking only at age data. Employment-based dependency ratios are based on estimates of who, within various sectors of the population, will—or will not—be working in the future. Employment-based dependency ratios are harder to estimate than age-based dependency ratios, but Dr. Casey believes that they are more beneficial.

Given changes in certain social benefits and spending levels made in the 1980s, Dr. Casey does not see a big increase in the British demographic-related "burdens" by 2010. This view is held by other British experts. For example, Dr. John Ermisch, a senior economist with the National Institute for Economic and Social Research (who has also been active in the "Britain 2010 Project") believes that if there is a "pensions problem" in the United Kingdom, it will not show up until the decade of the 2030s.[3] Changes made in the British retirement system in the 1980s have pushed back any "dooms day." Also, the older population is already a higher portion of the British population compared to the United States or Canada. "The wave hit us before it hit you [the United States and Canada], and we have already made several adjustments," Dr. Ermisch notes.

Looking at the long run, he expects to see "more stages to British life cycles. It will not be as simple as in the past. Being a student, for example, will happen at many different ages. It won't be the case that a young person leaves home never to live with his or her parents again. We will see many different household patterns," he explains.

Dr. Sar A. Levitan, Director of the Center for Social Policy Studies in Washington, D.C., appears to be representative of American experts who believe that demographic forces will set in motion various changes in public and private sector pension and benefit systems that could make population shifts manageable.[4] Dr. Levitan,

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[3] Based on an interview with Dr. John Ermisch in London on March 26, 1990.

[4] Based on an interview with Dr. Sar Levitan in Washington, D.C., on March 14, 1990.

who chaired a presidential commission that examined the U.S. labor force statistical systems, notes that if no basic changes are made by corporations and in government policies, current problems will continue to fester. For example, if present policies are not changed, it will be very difficult for both the American public and private sectors to meet their obligations in areas such as pensions and health care. He expresses considerable doubt that the U.S. public and private sectors could fund all their social and private obligations under existing rules and institutions.

However, Dr. Levitan expects that most institutions in the United States will be able to "manage these large demographic changes." He notes that "what is often left out of the picture is the process by which the rules of the road are changed. As pressures build in our system, people make changes and adjustments to reduce these pressures."

Slower labor force growth and mounting pension costs will create conditions in which Americans will work longer, he explains. Retirement ages will be extended, and Dr. Levitan expects that the U.S. Social Security system will raise its current 65 year-old retirement base. Also, the Social Security early retirement provisions will be made stricter. This adjustment will provide substantial cost savings in public and private sector pensions, since private sector rules have often followed public sector standards.

Indications are that the shift in the United States to later retirement might begin after 1995. As the growth of the civilian labor force slows, and as the number of young labor force entrants declines, older workers will be in greater demand by employers. Table 11 (p. 22) presents projections by the Bureau of Labor Statistics on changes in the 55 to 64 year-old U.S. civilian labor force. The Bureau of Labor Statistics expects that the older workforce will decline by 4.5 percent between 1986 and 1995. However, between 1995 and 2000, the Bureau of Labor Statistics expects that this portion of the workforce will increase by 14.2 percent. This development will be due in part to the later retirement of some Americans. As indicated in Table 11, both older men and women will experience this trend.

If such a trend develops—as expected—it will help to ease the mounting costs created by the changes in demographic patterns. It will reduce some of the public and private sector costs in this area.

TABLE 11. ACTUAL AND PROJECTED CHANGES IN THE 55 TO 64 YEAR-OLD U.S. CIVILIAN LABOR FORCE, 1986-2000

	Thousands			Percent Change	Percent Change
	1986	1995	2000	1986 - 95	1995 - 2000
Total	11,894	11,353	12,970	–4.5	+14.2
Men	6,954	6,438	7,238	–7.4	+12.4
Women	4,940	4,915	5,732	–0.5	+16.6

Source: U.S. Bureau of Labor Statistics.

From a company point of view, pension costs will remain very large in the 1990s. For example, as Ronald Hampel of ICI (and a member of the British-North American Committee) notes, his company employs 55,000 people in the United Kingdom and already has 75,000 pensioners there. The gap between the number of pensioners and active workers will rise at ICI in the 1990s.[5]

"There is, therefore, a burden which is going to become even more difficult over time," Mr. Hampel points out. "One has to recognize this fact of life as a future cost. We do not have some of the problems that exist in the United States associated with Medicare. In the United Kingdom, the National Health Service has made provisions for both current employees and pensioners. We recognize that paying for health care costs is a serious problem for many American employers."

At ICI, a key factor has been the employment of women. According to Mr. Hampel, "Women now represent somewhere between 30 to 40 percent of our company's hiring each year. Women are moving up the corporate structure very quickly. I do not believe that we have yet adequately developed solutions for dealing with the specific problems that women have in working in industry. But we recently instituted a career-break scheme where women may leave for five years and come back. There are no penalties associated with that leave under this program. It does not address the management side

[5] Based on a presentation to the BNAC Working Group on Demographic Issues in Montreal on December 1, 1989.

of the problem, but it should go quite a long way in meeting the unique demands of women working in our type of industry. It has radically altered things across the spectrum in our company."

Mr. Hampel believes that the availability of human resources is more a matter of educational quality than of simple demographics. He notes that "the impact of EC 1992 will not be as great in the human resource area as some people think. Clearly, in former West Germany, for example, the influx of people from the east will be a key factor, but there are no real signs that the United Kingdom is going to experience a major increase in labor force mobility because of EC 1992. People are still reluctant to move from their home base. There is a language difference among many EC nations which will not disappear in 1992."

In terms of the less developed world, the size of the demographic changes are so great that it is difficult to see how Third World institutions will be able to adjust and cope. As LDCs become increasingly unable to meet the basic social welfare needs of their growing populations, pressures from several different areas will be felt by the Western industrialized nations, including pressures from increased immigration and for more aid and support.

Within the industrialized nations, demographic-induced changes in their social welfare systems could be ameliorated by policies such as: postponing retirement; moderation of cost-of-living adjustments so that they are in line with increases received by the working population; taxing a portion of benefits received by wealthier individuals and their families; having more paid benefits based on actual need; and containment of the costs of services paid for by social welfare systems.

V. Demographics and the Labor Force

The demographic shifts discussed here can also be expected to raise many human resource issues that governments, corporations, labor unions, and educational institutions will have to face. Table 12 indicates very slow growth (or declines) in the working age populations in the United States, the United Kingdom and Canada.

As indicated in Table 13, the growth of the U.S. labor force in the past was in rough balance with the growth of U.S. employment. However, from 1979 to 2000, U.S. employment growth could be greater than increases in the labor force. After working off the impacts of two recessions in the early 1980s, the American labor market was tight in many areas prior to the 1990-91 recession.

Table 14 shows that U.S. employers and union leaders will be dealing with major changes in the labor force in the 1985 to 2000 period. For example, while American-born white males represented almost half of the U.S. labor force in 1985, they will make up only 15 percent of the new workers between 1985 and 2000.

TABLE 12. GROWTH RATES OF WORKING AGE POPULATIONS,* 1970-2030 (Percent)

	1970-80	1980-90	1990-2000	2000-10	2010-20	2020-30
United States	1.7	0.8	0.8	0.7	0.0	–0.2
United Kingdom	0.3	0.4	0.0	0.2	–0.1	–0.3
Canada	2.1	1.1	0.8	0.7	0.0	–0.3
Japan	0.9	0.9	–0.1	–0.5	–0.4	–0.2
Germany	0.6	0.4	–0.5	–0.7	–0.9	–1.7

*Working age populations are considered to be people ages 18 but under 65.

Sources: OECD demographics data file; 1970-80 based on actual numbers; all other years based on OECD demographic model (medium fertility variant projections).

TABLE 13. U.S. LABOR FORCE* AND EMPLOYMENT PROJECTIONS, 1950-2010 (Percent)

	Labor Force Growth	Employment Growth
1950-69	1.5	1.5
1969-79	2.4	2.5
1979-87	1.4	1.6
1987-90	1.6	2.0
1990-2000	1.2	1.3
2000-10	0.8	0.8

*The labor force is the sum of employment and unemployment totals.

Source: NPA Data Services, Inc.

Many non-American born people, females and minorities have not received some of the advantages that many native-born white males have received. This disparity has often been due to discrimination and other social factors. Yet, in this same period, Chart 2 (p. 26) indicates that the skill levels required to meet American labor demands will increase.

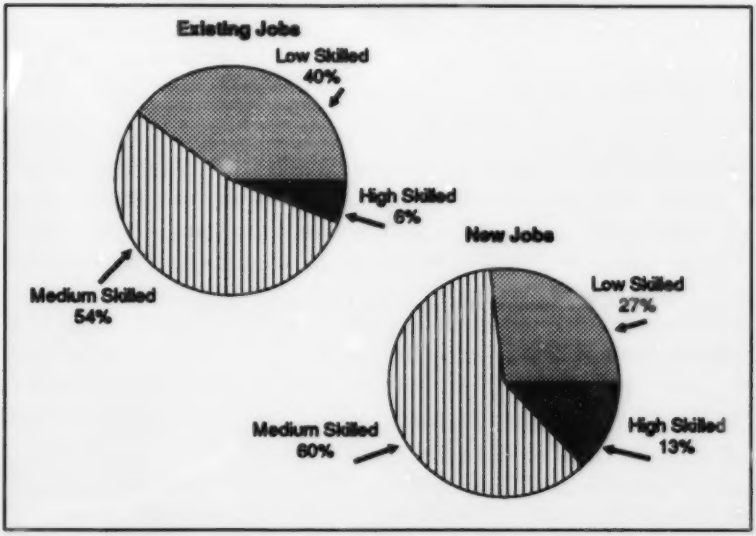
These trends point to some potential labor shortages and skill shortages in the U.S. labor market in the 1990s. The United Kingdom

TABLE 14. U.S. LABOR FORCE COMPOSITION AND GROWTH (Percent)

	U.S. Labor Force in 1985	Net New Workers Between 1985-2000
Total	100	100
American-born white males	47	15
American-born white females	36	42
American-born nonwhite males	5	7
American-born nonwhite females	5	13
Immigrant males	4	13
Immigrant females	3	9

Source: U.S. Bureau of Labor Statistics.

CHART 2. SKILL LEVELS REQUIRED BY NEW U.S. JOBS* VERSUS EXISTING U.S. JOB REQUIREMENTS



*Jobs created between 1985 and 2000.

Sources: Hudson Institute estimates based on data from the U.S. Department of Labor.

could face similar trends in this decade. Table 15 demonstrates that the percentage of women in the U.K. labor force will continue to rise in the 1990s. Between 1987 and 1995, the number of 16 to 24 year-olds in the United Kingdom is projected to fall by 1.1 million, or one-fifth the current total. Despite these major changes, current U.K. survey research indicates that only one out of seven U.K. employers believe that the number of 16 to 24 year-old workers will decrease in this period.[1] Research conducted by the Institute for Employment Research at the University of Warwick and the "Britain 2010 Project" point to U.K. skill shortages in several key occupational areas,

[1] Institute for Employment Research, University of Warwick, "Medium Term Assessment 1988/89," *Institute for Employment Research*, Bulletin Number 2, 1989, pp. 2-6.

TABLE 15. U.K. LABOR FORCE, 1980-2000

	(Millions)				
	1980	**1985**	**1990**	**1995**	**2000**
Total	26.2	26.8	28.2	28.5	28.8
Men	15.6	15.6	15.9	15.9	15.9
Women	10.6	11.2	12.3	12.6	12.9
	As a Percent of the U.K. Labor Force				
Men	60%	58%	57%	56%	55%
Women	40	42	43	44	45

Sources: The British Department of Employment and *The Employment Gazette*, April 1989, pp. 159-172.

including management and administration, various professional and technical occupations, and several skilled craft fields.[2]

Demographic shifts combined with changing labor demands of employers raise many employment and training issues for the three countries. Of course, skill shortages can be expected to induce market forces that in the longer term will help bring the picture back into equilibrium. Nevertheless, labor markets often move at a much slower pace than, say, financial markets. Recently, many governments have expressed renewed interest in various human resource programs.

"These demographic changes will play themselves out in uncounted ways," says Howard D. Samuel, President of the Industrial Union Department of the AFL-CIO (and a BNAC member).[3] "For example, they will give rise to the growth of some new industries such as home services for women trying to carve out a career and raise a family at the same time. We have already seen a rise in part-time jobs, most of them filled by people who need and want full-time jobs. Many of these part-timers—and some full-time employees as well—are part of the so-called contingent workforce. These temporary workers enjoy few benefits and are usually paid less than permanent

[2] Ibid.

[3] Based on a presentation to the BNAC Working Group on Demographic Issues in Montreal on December 1, 1989.

workers. Service industries which have traditionally depended on young workers and high turnover will have to look to older workers instead—and perhaps pay more as well. But because of the high rate of entry by minorities and immigrants who have traditionally been disadvantaged educationally, we may have to devote more of our resources to remedial education and adult education—which could provide welcome relief for colleges losing their traditional younger student bodies. It is clear by now that the need for better educated workers will grow substantially in the years ahead."

Thus, on the supply side of the labor market, we can expect to see slower growth and more female, minority, older, and immigrant workers. In many cases, employers will have to increase their training of workers who come from nontraditional labor pools. BNAC business members note that some of the key labor shortages will be in occupations that are among the most mobile sectors of the population (e.g., managers, technologists, doctors, and academics). These business executives therefore expect to see many "brain drains." As one BNAC member (the leader of a major corporation) commented: "To bring a company employee from the United States to Canada to do a similar job, the salary increase in nominal dollars to keep the individual 'whole' has to be in the range of 50 to 70 percent. I believe this to be an unsustainable differential in the longer term."

Women in the Labor Force

A key change in the labor markets of the United States, Canada, the United Kingdom, and other industrialized nations has been the dramatic increase in female employment. As indicated in Table 16, a majority of American, British and Canadian adult women are now in the paid workforce. In 1950, only 34 percent of American women were working outside the home, compared to 57.5 percent in 1990. In the past few years, there has been a small decline in the U.S. labor force participation of some mothers. This shift must be coupled with the recent slight increases in the U.S. birth rate. Thus, female labor force activity may grow at a slower pace in the United States in the 1990s compared to the 1980s.

The growth in the number of women in the labor force increases the total supply of workers, which can help employers meet their

TABLE 16. ECONOMIC ACTIVITY RATES FOR WOMEN IN THE LABOR FORCE, 1988*

	Percent Active in the Labor Force
United States	56.6
United Kingdom	51.5
Canada	52.3
Germany	42.0
France	47.2
Netherlands	42.3
Denmark	61.0

*A woman is counted as being economically active if she is employed or seeking employment.

Sources: Statistical Office of the European Communities, the U.S. Bureau of Labor Statistics and Statistics Canada.

human resource needs in periods of labor shortages. However, this growth has also raised many difficult issues for women workers and their families, as well as many tough equity-related issues that currently remain unresolved.

For example, many working women are also the mothers of young children. In the United Kingdom, 39.6 percent of the mothers with a child under 5 years are currently in the labor force. A majority of British mothers, 55.4 percent, with a child 15 years or younger are in the labor force. Despite some changes in the allocation of work within households, women still do the major share of the housework and child care activities.[4] Many women thus have a difficult time holding down two jobs at the same time (i.e., paid employment outside the home and unpaid work inside the home). Child care arrangements have also proven to be difficult. In the United States, only 25

[4] Sar Levitan, Richard Belous and Frank Gallo, *What's Happening to the American Family?* (Baltimore: The Johns Hopkins University Press), 1988, pp. 90-106.

percent of the children with a working mother are covered by formal day care arrangements.[5]

Besides these difficulties, women workers tend to be concentrated in a few industries and occupations in the United States, Canada and the United Kingdom. This pattern has been called the horizontal segregation of labor according to gender. Women are over-concentrated in certain sectors of the economy. For example, in the United Kingdom, women represent 68.5 percent of education workers and 79.7 percent of medical workers, but they represent only 11.4 percent of British managers.

Also, women workers tend to be paid less then male workers in similar positions. In the United Kingdom, the primary reason for low pay for women is not that they are concentrated in low skill jobs, but rather that they are paid less than males for performing work of similar skill.[6]

Thus, the increased number of women in the workforce has raised numerous issues, including equal pay for equal work, maternity leave and maternity pay policies, improved child care, flexible work schedules, and nongender-based career enhancement and skill training programs. Demographic shifts in the labor force will require that employers, governments and union leaders deal with these sensitive issues.

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[5] Ibid., p. 102.

[6] *Bargaining Report*, June 1990, pp. 12-15.

VI. Challenges and Opportunities

The demographic shifts discussed here will create many challenges and opportunities. Many new markets will be created by these changes. As Earl Orser, Chairman of the London Life Insurance Company (and a BNAC member) explains:

> We have to identify and plan for a dramatic shift in the profile of our customer. He is no longer a young white Anglo Saxon Protestant with a wife and children depending on him. Our recruiting efforts must reflect that reality. So must our marketing and our packaging.
>
> We are no longer selling to the average man in an average Canadian town. We are selling to a multi-ethnic market, a cross-section of the global village, living and working in Canadian cities.
>
> It is not only the cultural mix of our market that is undergoing change. As the population ages and more women join the workforce, the young man with the family who used to be a primary marketing target is now a rare breed.[1]

Basic demographic data can hide as much as they reveal. For example, there has been a vast revolution in family structure. The traditional American family (i.e., two parents, a working father and a homemaker mother, and children) now represents less than 10 percent of U.S. households. More than 50 percent of U.S. marriages end in divorce. One out of every four births in the United States takes place out of wedlock.

Schools and other institutions will be asked to assume more of the responsibilities that families once carried. This is a very difficult task; institutions often cannot step in to fill the responsibilities once borne by families. While we might expect employers and governments to make some changes to accommodate these new family-related

[1] Based on a presentation to the BNAC Working Group on Demographic Issues in Montreal on December 1, 1989.

realities, serious adjustment problems may occur in many cases. A key change will be shifting roles in child and elder care arrangements.

In this area three leading journalists from the United States, the United Kingdom and Canada have made telling observations.

Frank Swoboda of *The Washington Post* calls members of the current middle-age generation the "sandwich generation"—they are sandwiched between having to provide care for children and for elderly relatives.[2] Compounding this problem is the need for two paychecks per household to pay bills and meet expenses. With two working parents outside the household, it is extremely difficult for many in the "sandwich generation" to meet all their work and family responsibilities. Supporting institutions in many cases still reflect the typical family structure of the 1950s and 1960s. Thus, Mr. Swoboda expects major drives to change child care and elder care arrangements in the 1990s. He also expects to see new efforts to make working conditions more flexible in terms of work hours, pay and employee benefit structures, and career ladders.

David Walker, a British journalist and social commentator, believes that the problems caused by demographic changes will push several issues onto the British agenda in the 1990s.[3] A key issue could be immigration. "Within the European Community, there are many ethnic groups who would like to immigrate to the U.K.," he notes. "This would be a difficult political issue for us." Also, labor shortages will raise demographic issues on the British agenda.

A significant demographic change in the United Kingdom has been the creation of a true U.K. "middle class which includes skilled blue collar workers as well as professional white collar workers," Mr. Walker says. "At the same time, we are seeing a significant U.K. underclass." He believes that the United Kingdom will do more for its "underclass" in the 1990s compared to the 1980s and that this will be expensive.

Jeffery Simpson of *The Globe and Mail* does not see generational conflicts growing in Canada.[4] "We have so much inter-regional

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[2] Based on an interview with Mr. Frank Swoboda in Washington, D.C., on April 3, 1990.

[3] Based on an interview with Mr. David Walker in London on March 26, 1990.

[4] Based on a telephone interview with Mr. Jeffery Simpson on April 4, 1990.

warfare that it is hard to get Canadians excited about demographic changes," he explains. However, he believes that demographic changes play a large role in Canadian inter-regional conflicts.

Policy Implications

The manageability of the major demographic shifts outlined in this report is possible only if sound actions are taken now by both public and private sectors in the United States, Canada and the United Kingdom. Complacency could result in the worst case scenarios becoming reality. The data and estimates presented here make clear that public and private sector decisionmakers in the three countries will have to give greater emphasis to demographic-related policy areas, including:

Immigration. Pressures will mount in all three countries for increased immigration levels. Decisionmakers will have to be concerned about the levels of immigration and the capacity of their country to absorb more immigrants.[5] With these considerations in mind, the Economic Council of Canada, for example, has called on the government to start a gradual build up of immigration to 1 percent of the Canadian population per annum by the year 2015. Care must be given to ensure that schools, health care services and welfare rolls do not become overburdened. If circumstances are not helpful, a growing number of unskilled refugees and immigrants could experience physical and psychological trauma, some Canadian observers have charged.[6] Similar situations exist in other major Western countries. Immigration and the ability to absorb new workers and their families will be a difficult issue in Canada, the United States and the United Kingdom.

While the potential for vast increases in migration exists (e.g., because of problems in Eastern Europe and the Soviet Union and numerous difficulties in Africa, Latin America, the Middle East, and Asia), there

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[5] Christie McLaren, "We've Lost Control of our Border, Critics Say," *The Globe and Mail*, February 27, 1991, p. A4.

[6] Ibid.

has been little comprehensive thinking and planning about this issue. For example, leading international agencies have assigned only a few full-time staff to migration-related issues. When a crisis develops, the resources devoted to short-term solutions may increase, but there is little long-term planning before a crisis hits. International agencies, nation-states and private sector leaders should devote much more planning to the long-term implications of mass migration.

Adjusting Retirement. The three countries will find it difficult to afford continued early retirement. More flexibility in retirement ages will be necessary, and these shifts will moderate the costs of our public and private sector retirement systems. As discussed above, these changes could range from more moderate cost-of-living adjustments to taxes on some of the benefits paid to wealthier individuals. Enhancement of informal support, housing conversion to help meet the needs of elderly individuals and fiscal adjustments in favor of those providing support for the elderly are further specific policy initiatives that could help elderly individuals as they cross the difficult bridge from work to retirement.

Training and Education. Given slower labor force growth and the rapid pace of technological change, governments, corporations and unions will have to place more emphasis on the continuing education, training and retraining of workers to meet the actual skill levels required by employers and society.

Third World Development. If demographic pressures continue to mount in the Third World, their impact will be felt in the United States, Canada and the United Kingdom. For example, currently 53 percent of Mexico's population is age 19 or younger (compared to 28 percent in the United States). Mexican poverty and unemployment will lead many young Mexicans to seek a better economic life in the United States or Canada. Mexican emigration can only be reduced as economic conditions improve within Mexico. Efforts to better conditions in Third World countries will have some positive results for First World countries.

U.N. data and estimates indicate that demographic-related problems for the poorest LDCs are much more serious than for LDCs

as a group. For example, between 1985 and 1990, the population growth in all LDCs was 3.2 times greater than the population growth in the developed world. However, in this period, the population growth in the poorest Third World countries was 4.6 times the population growth in the developed world.[7] Serious population pressures will be strongest in the poorest of the LDCs, and these pressures will impact the more developed nations.

This study has presented evidence showing that several significant demographic-related changes will occur in the near future. If we take action soon, we can plan for these changes. There is still time to institute the policies needed to meet these challenges.

[7] *World Population Prospects* (New York: United Nations, 1991), pp. 9-10.

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